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Github Repo: [Github](https://github.com/1nnocentia/JavaFirstProject.git)

Development Environment Setup

For my first Java project, I installed JDK 11 from the official Oracle website. After installation, I verified it by running *java -version* and *javac -version* in the terminal. In Visual Studio Code, I installed the *Extension Pack for Java* to enable better support for Java development. As for Git, since I already had it installed, I simply initialized a repository in my working folder. Later, I upgraded my JDK to version 17, and eventually to version 21, ensuring compatibility with the latest features and improvements.

Challenge during the setup and how to resolved

1. At first, I stored the list of fun facts in an array. However, as the number of fun facts grew, I realized it would be better to keep them in a separate JSON file for better organization and scalability. Initially, I used SimpleReader to read the JSON file, but I encountered issues with special characters such as apostrophes (‘) and hyphens (-). After searching for a better solution, I discovered the Gson library, which provides more robust support for parsing JSON efficiently. Switching to Gson resolved my character encoding issues and made data handling much easier.
2. Moreover, one of the challenges I encountered while working on this task was reacquainting myself with Java syntax and understanding how to apply it effectively. One particular aspect I struggled with was utilizing ANSI escape codes. To overcome this, I had to read several articles to gain a deeper understanding of ANSI codes and how to implement them correctly.
3. Before the semester began, I briefly studied switch-case statements. I came across a more concise version of switch-case but was unable to run it on my laptop due to an error indicating that JDK 14 or higher was required. Two days ago, I upgraded my JDK to version 17, and I was finally able to execute switch-case with thin arrow syntax on my laptop. Excited by this improvement, I decided to incorporate it into my code, specifically for handling user color selections.
4. Just yesterday, on Thursday, after completing this assignment, I went home. Once there, I decided to rerun my code and add more comments for clarity. However, I encountered an error caused by the Java extension (Red Hat), which required me to upgrade to JDK 21. At first, I was confused as to why the code wouldn’t run, so I attempted to download JDK 21. Unfortunately, I mistakenly downloaded the wrong version, which resulted in unnecessary time spent troubleshooting before finally resolving the issue.